

NON-PUBLIC?: N  
ACCESSION #: 8807120238  
LICENSEE EVENT REPORT (LER)

FACILITY NAME: Perry Nuclear Power Plant, Unit 1 PAGE: 1 of 3

DOCKET NUMBER: 05000440

TITLE: Reactor Scram and Containment Isolation Caused by Loss of Electrical  
Distribution Busses Due to Inadvertent Breaker Operation  
EVENT DATE: 06/08/88 LER #: 88-023-00 REPORT DATE: 07/07/88

OPERATING MODE: 1 POWER LEVEL: 023

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR  
SECTION  
50.73(a)(2)(iv)

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SUPPLEMENTAL REPORT EXPECTED: No

ABSTRACT: On June 8, 1988 at 0923, a reactor scram and Nuclear Steam Supply Shutoff System Balance Of Plant (BOP) containment isolation occurred due to loss of power to both Reactor Protection System (RPS) power distribution busses. At 0922 the Main Turbine tripped due to high level in a Moisture Separator Reheater drain tank. During recovery from the Main Turbine trip, an operator inadvertently tripped the two mainline breakers feeding the BOP electrical distribution busses. Consequently, both RPS busses were deenergized, resulting in a reactor scram, a full containment isolation, both Reactor Recirculation Pumps tripping and loss of Feedwater. The control room operators verified all automatic actuations occurred. The Reactor Core Isolation Cooling System was started at 0926 and utilized to control reactor vessel level and pressure.

The cause of the event was personnel error. The Supervising Operator turned the control switches in the wrong direction when attempting to reset the breaker position indication flags resulting in the BOP supply breakers opening. The operator has been counseled by plant management and disciplinary action has been taken. In accordance with the licensed operator requalification training program, operators will receive training on the sequence of events which led to this report.

(End of Abstract)

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On June 8, 1988 at 0923, a reactor scram and Nuclear Steam Supply Shutoff System (NSSSS) (JM) Balance Of Plant (BOP) containment isolation occurred due to loss of power to both Reactor Protection System (RPS) (JC) power distribution busses. At the time of the event, the plant was in Operational Condition 1 (Power Operation) with reactor thermal power approximately 26 percent of rated and reactor vessel (RPV) pressure approximately 930 psig.

On June 8 at 0900, the Moisture Separator Reheater (MSR) (SB) Drain Tank 2A level was discovered to be slowly increasing due to the normal and alternate drain control valves failing to automatically open. Plant operators were dispatched to manually open the drain valves. However, before the valves could be opened, the Main Turbine (TA) tripped on MSR Drain Tank high level at 0922. The loads transferred from the Auxiliary Transformer to the Startup Transformer as expected. At 0923, while attempting to reset the breaker status flags, the operator at the controls inadvertently turned the control switches the wrong direction tripping the two breakers feeding the plant from the Startup Transformer. This action resulted in a loss of the BOP electrical distribution. Consequently, both RPS busses were deenergized, resulting in a reactor scram, a full BOP containment isolation, both Reactor Recirculation Pumps tripping and loss of Feedwater. The control room operators verified all automatic system actuations occurred as designed and started the Reactor Core Isolation Cooling (RCIC) (BN) system at 0926, to control reactor vessel level and pressure.

At 0955 the operators systematically reenergized the BOP busses in accordance with the System Operating Instruction. The RPS busses were reenergized at 1119. The Motor Feedwater Pump was started and reactor vessel level control transferred to the Startup Level Controller at 1145. RCIC was secured at 1332 after verifying reactor vessel level and pressure under normal shutdown control. The post scram evaluation was completed and the plant entered Operational Condition 2 (Startup) June 9 at 1617.

The cause of the loss of power to the BOP electrical distribution was personnel error. The Supervising Operator turned the control switches in the wrong direction when attempting to reset the breaker status flags resulting in opening the BOP supply breakers. The normal MSR Drain Tank 2A level control valve automatically closed and failed to reopen due to binding of the packing. The alternate level transmitter failed low preventing the alternate drain valve from opening. Excess packing was removed from the valve, the transmitter was repaired and both were returned to service on June 9.

Loss of AC power is discussed in Chapter 15 (Section 15.2.6) of the Perry Updated Safety Analysis Report (USAR). During this event all plant conditions were within the envelope of the USAR analysis, and all plant systems responded as designed to maintain the plant in a safe condition. Therefore, this event is considered to have no safety significance.

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A previous event occurred October 27, 1987 (LER 87-072) in which a control room operator deenergized one BOP electrical distribution bus while attempting to change a breaker position indication flag. Operation of the wrong control switch caused the breaker to trip resulting in a loss of feedwater and subsequent reactor scram. The corrective actions included counseling of the individual operator as well as disciplinary action. Although these actions increase the operation staff overall awareness and attention to detail, it could not have been expected to have prevented this event.

In order to reduce the potential for recurrence, the operator who performed the erroneous switching operation has been counseled by plant management and disciplinary action has been taken. In accordance with the licensed operator requalification training program, operators will receive training on the sequence of events which led to this report.

Energy Industry Identification System Codes are identified in the text as (XX).

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